CS410 - Syllabus

1. Course Description

Lecture/Lab hours: See schedule	Prerequisites: *CS150*	Required for: major requirement for CS	Course Credit: *3*

Students should develop an understanding of how modern operating systems operate. A successful student will emerge this course knowing how operating systems implement the programming and application features he or she has learned prior to this course. This course entails a combination of theory and practice on operating systems. From the theory perspective, this course consists of an overview of the major functional blocks of an operating system. In terms of practical experience, this course will provide students with an understanding of the foundations of an operating system, such as working with shells, administering the system and using graphical administration tools.

2. Learning Outcomes

In this course you will develop an understanding of how modern operating systems operate. A successful student will learn how operating systems implement the programming and application features he or she has learned prior to this course. This course entails a combination of theory and practice on operating systems. From the theory perspective, this course consists of an overview of the major functional blocks of an operating system. In terms of practical experience, this course will provide students with an understanding of the foundations of an operating system, such as working with shells, administering the system and using graphical administration tools

3. Topics

- Types of Operating Systems
- Historical Perspective
- Architecture
- Process Management
- Storage Management
- I/O Systems

- Case Studies (Linux, Windows)

4. Textbooks

Title	ISBN# / Editor	Author	Priority
Modern Operating Systems	Prentice Hall 3rd edition	Andrew S. Tanenbaum **	Required
Operating System Principles	0-13-026611-6	Lubomir Bic Alan Shaw	Optional
Operating System Concepts	0-471-25060-0	Silberschatz Galvin/Gagne	Optional
Operating Systems	0-13-182827-4	Deitel Chofnes	Optional

Note: ** Tanenbaum's text is easy to read and has good technical content. Tanenbaum is a well-known textbook author (he also has texts on architecture and networks) and is a researcher in distributed operating systems.

Syllabus (cont)

5. General Information

Classroom: *Henry Hall – H124*	**Email:** *pmartins@chaminade.edu*
Instructor: *Dr. Martins*	**Schedule:** *mySchedule*
Office Number: *Henry 123-D*	**Web:** http://cs.chaminade.edu/faculty/pmartins/
Telephone: *(808) 739-4601*	**Fax:** *(808) 440-4278*
Office Hours:	**See schedule**	***Extra Office Hours: email me***

6. Evaluation

Evaluation	# Points	Tentative Dates
First test (T1)	10	
Second test (T2)	10	
Third test (T3)	10	
Final exam (T4)	10	See Schedule
1st Assignment (A1)	15	
2nd Assignment (A2)	15	
Quizzes (QZ)	30	

- The final grade (FG) will be determined as follows: FG = (T1+T2+T3+T4)*10 +30* Qn+10* (A1 + A2).

- For example, a student that obtained 10 points in the first test, 10 in the second test, 10 in the third test, a total of 7 points in the final exam, 30 in the quizzes, 10 in the first assignment, 14 in the second assignment, will

accumulate a total of 91 points (meaning a final grade A).

- Quizzes will be the mean average of all quizzes taken, scaled at 30%. It can be calculated as $QZ = 3 * (Q1 + Q2 + Q3 + ...Qn)/n$, where n is the total number of quizzes in this course. Each quiz will be graded in a scale from 0-10.

- For example, if there are five quizzes, then $QZ = 3*(Q1 + Q2 + Q3 + Q4 + Q5)/5$.

- The final exam is **comprehensive.**

Special Rules and Other Notes:

1. The lowest grade **midterm test** (i.e. T1, T2 or T3) will be replaced by the final examination (T4), if and only if the final examination grade is greater than the lowest grade test.

This rule is based on the fact that the final examination is comprehensive, and is intended to motivate students who do not perform well on earlier exams to persevere and overcome those setbacks by further study. It also solves the problem of occasional emergencies which may cause a student to miss a midterm examination.

7. Grading

Grade	Interpretation	Points
A	Unusual degree of intellectual initiative.	90-100
B	Superior work done in a consistent and intellectual manner.	80-89
C	Average grade indicating a competent grasp of subject matter.	70-79
D	Inferior work of the lowest passing grade, not satisfactory for fulfillment of prerequisite course work.	60-69
F	Failed to grasp the minimum subject matter; no credits given.	00-59

8. Students Rights & Responsibilities

Please refer to the student rights and responsibilities in the Student Handbook.

9. Attendance

Experience has shown a high correlation between absenteeism and low grades. Role will be taken at each class. Attendance will be weighed in determining your final grade. Students are expected to attend all classes. If a student misses class, it will have the following adverse effect on his/her grade:

- Grade lowered by one grade if 7 times absent.
- Student will be withdrawn from the course, or take a grade of "F," if 10 or more times absent.

10. Quizzes

Pop quiz may be given at any time without advance announcement, if I get the impression students are not keeping up with the course. There will be no make-ups for quizzes, but the same forgiveness rule applies as for attendance.

11. Communication

If you are experiencing difficulty or are concerned about your progress, please contact me right away. Problems are usually easier to solve when they are addressed early.

You are required to verify that your e-mail address is included in the class e-mail list. I will send everyone a message at the start of the term. If you don't get that first message, make sure you are added to the list.

Check regularly for electronic mail sent to you containing information about this course. You are also encouraged to use e-mail to ask questions and report problems. As a Chaminade student you have an email account firstInitial.LastName@student.chaminade.edu.

Because of past problems with impersonation, I cannot reply to e-mails related to this course from other e-mail addresses.

This syllabus and other information, such as course announcements, assignments, lecture notes, and some useful links to other web sites, will be posted on the CS Department's web site for the course, which is located at http://cs.chaminade.edu/faculty/pmartins. Access to most of the materials on that site will require a special login name

and password, which I will provide to you via e-mail.

12. Punctuality

Students. Punctuality will also be weighed in determining your final grade. Students are expected to be on time for class. If a student is late to class (15 minutes or more) or leaves class early (15 minutes or more) , it will have the following adverse effect on his/her grade:

- Grade lowered by one grade if 7 times late or leaving class early.
- Student will be withdrawn from the course, or take a grade of "F," if 14 or more times leaving class late or early.

Faculty. I am normally punctual with classes. If in any circumstance I do not show up punctually, then you are expected to wait 15 minutes before considering the class cancelled and leaving.

A good time reference is the official U.S. time.

13. Exams

Missed exams will not be covered with extra exams or make up exams. A missed midterm will be replaced by the final exam.

Students are not allowed to do exams before or after the set date. You know the date of all your exams, therefore it is expected that you organize your trips around these dates.

Upon receiving your graded exam you should check for any discrepancies. Complaints will not be accepted after you leave the classroom or if the exam was originally written using a pencil. If a discrepancy is found the entire exam will be revised and not only the problem found. A revision of an exam may increase or lower your grade.

You always have the entire class time to answer the exam. You should not expect any extension to this time.

Students are expected to do their own exam. Copying from each other or from published sources is prohibited. The penalty for copying on tests, exams or quizzes, or (also for sharing information about your test on a testing scenario) is:

- A zero mark for that item of evaluation (exam, quiz, etc), OR

- An F for the entire course.

14. Assignments

All assignments are due on the day indicated on them and must be turned in as specified. *Do not expect forgiveness for lateness. Whether to accept any late turn-ins of assignments will be entirely at my discretion*. If a late assignment is accepted, the score will ordinarily be reduced. The amount of the reduction will be entirely at my discretion, and may depend on how late the assignment is. In any case, no work will be accepted for grading after a solution is discussed or handed out, either in the class or on the web. Late submissions without a substantial reason such as illness will generally be subject to penalties as follows:

- Same day as due but after desired time..............03%
- Next day...10%
- Two to four days:..20%

- Five days or more:...50%

There are certain expectations concerning the format and substance of assignments. They will be assessed based on the following criteria:

- <u>Comprehensiveness</u>. Elaborate as much as you can on the given issues or topics. Avoid giving short or incomplete answers.

- <u>Originality</u>. When formulating your answers, use your creativity (your own words, statements, programs etc..) i.e. avoid paraphrasing the text book.

- <u>Correction</u>. Needless to say, the ideal answer will be correct from a logical viewpoint.

- <u>Organization.</u> The structure, organization and clarity of the material that you present (program or document) is also part of the criteria for assessment and will also be considered in grading. Unless otherwise stated, only electronic document files are accepted - no handwriting please.

A major requirement of your programs is their coverage. No credit will be given for programs that cannot be compiled or

that do not work on any of the test cases. Beyond this, a significant portion of the credit will be determined by how many of the test cases, and also which of them, your program handles correctly.

Plagiarism. While informal discussion is encouraged, students are expected to do their own work. Copying from each other or from published sources is prohibited, including "cut and paste" from websites. The penalty for copying on assignments is applicable to all parties involved, i.e. those who copy an assignment and those who share an assignment labeled *"individual"*. It consists of a zero mark for that item of evaluation for the first time, and an F for the course for the second occurrence.

Backup. Always keep a backup of all assignments and quizzes that you submit during the semester, in case you need to re-submit it later on.

Notifications. Needless to say, it is your responsibility to notify your instructor as soon as possible of any events that may prevent you from doing your assignment (such as computer or application malfunctioning in one our labs, essential information missing or misrepresented in a web page and so on), so that the appropriate actions can be taken to address the problem.

15. Participation

The study of much of Computer Science is cumulative (*i.e.*, understanding earlier material well is necessary to grasp later material. Do not allow yourself to fall behind, by postponing studying, and then figure you will jump ahead to catch up with the rest of the class.

16. Remarks

- **Copies.** All graded work will be returned in class for examination and taken back for the course records. Students who miss class are responsible for picking up their papers no later than one week after the start of the next semester. Work that is not picked up by then may be discarded. The one exception are final examinations. The original copies of all final examinations will be retained in the department for six months.

- **Note.** The contents of this syllabus can be changed with advance notification;

- **Class Meetings**. For a few of the scheduled days, shown in the course calendar, there may be no regular class because I am required to travel on University business. This class time will be made up by specially scheduled class meetings (to be arranged) in which students will demonstrate their projects for me and the other students who are able to attend. These meetings will be arranged at multiple times, if necessary, so that

every student can demonstrate his or her project.

- **Lab policy.** No eating or drinking in the labs. Eating or drinking in a computer based lab is considered obstruction of teaching, administration. Determination of whether a student is being obstructive or disruptive is left to the sole discretion of the faculty responsible for the class or activity. See attached email from Hg.

Last updated:

Teaching Schedule

Time	MON	TUE	WED	THU	FRI
08:00	PROJECT	CS410	PROJECT	CS410	PROJECT
09:30	"	CS430	"	CS430	"
10:50	"	CS430	"	CS430	"
11:00	"	Office hours	"	Office hours	"
12:30	"		"		"
01:50	"	Project	"	Project	"
02:00	"	"	"	"	"
03:20	"	"	"	"	"
04:50	"	"	"	"	"
05:00	"	"	"	"	"

Calendar

Class	Day of week	Day of Month		Month
w01d1	Tuesday	25		
w01d2	Thursday	27		**AUGUST**
w02d1	Tuesday	01		
w02d2	Thursday	03		
w03d1	Tuesday	08		
w03d2	Thursday	10		**SEPTEMBER**
w04d1	Tuesday	15		
w04d2	Thursday	17		
w05d1	Tuesday	22		
w05d2	Thursday	24		
w06d1	Tuesday	29		
w06d2	Thursday	01		
w07d1	Tuesday	06		
w07d2	Thursday	08		
w08d1	Tuesday	13		**OCTOBER**
w08d2	Thursday	15		
w09d1	Tuesday	20		
w09d2	Thursday	22		
w10d1	Tuesday	27		
w10d2	Thursday	29		
w11d1	Tuesday	03		
w11d2	Thursday	05		
w12d1	Tuesday	10		
w12d2	Thursday	12		**NOVEMBER**
w13d1	Tuesday	17		
w13d2	Thursday	19		
w14d1	Tuesday	24		
w14d2	Thursday	26		
w15d1	**FINALS**	Final examination schedule		**DECEMBER**

- Note: w = week of instruction and d = day of instruction
- Example:
  - w13d1 = week 13, day 1 (Tuesday for a TTh course)
  - w12d2 = week 12, day 2 (Thursday for a TTh course)

Final Examination Schedule

Class Day	Class Time	Exam Day	Exam Time
TR	9:30 - 10:50 AM	Monday, Week 16	8:00 - 10:00 AM
MWF	9:00 - 9:50 AM	Monday, Week 16	10:30 - 12:30 PM
MWF	2:00 - 2:50 PM	Monday, Week 16	12:45 - 2:45 PM
ALL EN *	---------------	Monday, Week 16	3:00 - 5:00 PM
TR	8:00 - 9:20 AM	Tuesday, Week 16	8:00 - 10:00 AM
MWF	1:00 - 1:50 PM	Tuesday, Week 16	10:30 - 12:30 PM
TR	12:30 - 1:50 PM	Tuesday, Week 16	12:45 - 2:45 PM
ALL JA, SPN*	---------------	Tuesday, Week 16	3:00 - 5:00 PM
TR	11:00 - 12:20 PM	Wednesday, week 16	8:00 - 10:00 AM
MWF	11:00 - 11:50 AM	Wednesday, week 16	10:30 - 12:30 PM
TR	2:00 - 3:20 PM	Wednesday, week 16	12:45 - 2:45 PM
MWF	4:00 - 4:50	Wednesday, week 16	3:00 - 5:00 PM
MWF	8:00 - 8:50 AM	Thursday, week 16	8:00 - 10:00 AM
MWF	10:00 - 10:50 AM	Thursday, week 16	10:30 - 12:30 PM
MWF	3:00 - 3:50 AM	Thursday, week 16	12:45 - 2:45 PM
TR	3:30 - 4:50 PM	Thursday, week 16	3:00 - 5:00 PM

Office Hours

T,Th	11:00 - 12:00	+	appointment	via	email

- Note: This file contains all time-sensitive information for the courses I teach.

Deadlines - Important Dates

First Test	week 04 (day 2)
First Assignment	week 06 (day 2)
Second Test	week 08 (day 2)
Second Assignment	week 10 (day 2)
Third Test	week 12 (day 2)
Final Deadline for all assignments (under 30% penalty)	week 15 (day 2)
Final Test	week 16